



UNITED STATES PATENT AND TRADEMARK OFFICE

7D
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/552,292	04/19/2000	Arch D. Robison	42P11329	2880
8791	7590	06/06/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			KISS, ERIC B	
		ART UNIT		PAPER NUMBER
				2192

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/552,292	ROBISON, ARCH D.
	Examiner Eric B. Kiss	Art Unit 2192

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 09 November 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-6 and 10-17 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-6 and 10-17 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Appeal Brief filed on 9 November 2004, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

- (1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,
- (2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Response to Arguments

2. Applicant's arguments, see pp. 7-14 of the Appeal Brief, filed 9 November 2004, with respect to the rejections of claims 1-6 and 10-17 under 35 U.S.C. §103(a) have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, new grounds of rejection are made in view of newly discovered prior art and further consideration of the pending claims, as set forth below.

Specification

3. The use of the trademark JAVA has been noted in this application. It should be capitalized wherever it appears (capitalize each letter or accompany the trademark with an

appropriate designation symbol, *i.e.*, ™ or ®) and be accompanied by the generic terminology (use trademarks as adjectives modifying a descriptive noun).

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

This objection may be overcome, for example, by simply replacing each occurrence of "Java" with "JAVA programming language".

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-6 and 10-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "accurate" in claims 1, 10, and 13 is a relative term which renders claims 1-6 and 10-17 indefinite. The term "accurate" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In the interest of compact prosecution, the Examiner subsequently interprets "an accurate state" in claims 1, 10, and 13 as "the required state" for the purpose of further examination.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 1-6 and 10-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The language of the claims raises a question as to whether the claims are directed merely to an abstract idea that is not tied to a technological art, environment, or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. §101. This rejection may be overcome, for example, by amending claims 1 and 10 to recite “a computer-implemented method” instead of simply “a method”.

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. §101 (non-statutory) above are further rejected as set forth below in anticipation of Applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 2, 4, 5, 10-14, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,628,016 to Kukol.

As per claim 1, *Kukol* discloses analyzing a program to determine the state of a data structure at selected program points (see, for example, col. 17, line 55, through col. 19, line 12); partitioning the determined state into components that may each be set separately (see, for example, col. 19, line 50, through col. 20, line 57); and determining operations to be inserted into the program in order to set each component of the state at each selected program point, wherein the operation assure that the data structure will be in the required state at the selected program points (see, for example, col. 21, lines 1-28); and placing such operations to eliminate partial redundancies of said operations (see, for example, col. 21, lines 1-28).

As per claim 2, *Kukol* further discloses the data structure storing items on a first-in-last-out basis (the exception registration record is stored on the stack; see, for example, col. 21, lines 1-28).

As per claim 4, *Kukol* further discloses the data structure representing actions to be taken by the program if an exception occurs (see, for example, col. 22, lines 15-27).

As per claim 5, *Kukol* further discloses the selected program points being the points of execution immediately before instructions that might cause an exception (see, for example, col. 9, line 40, through col. 10, line 25).

As per claim 10, *Kukol* discloses such a method (see, for example, the disclosure applied above to claim 1).

As per claim 11, *Kukol* discloses such a method (see, for example, the disclosure applied above to claims 1, 2, and 4).

As per claim 12, *Kukol* discloses such a method (see, for example, the disclosure applied above to claim 1; the value in FS:[0] can be used to determine the Extended Stack Pointer register value... ; see, for example, col. 21, lines 13-17).

As per claim 13, *Kukol* discloses such a medium (see, for example, the disclosure applied above to claim 1, and col. 8, lines 17-61, describing the use of software in memory).

As per claim 14, *Kukol* discloses such a medium (see, for example, the disclosure applied above to claim 2).

As per claim 16, *Kukol* discloses such a medium (see, for example, the disclosure applied above to claim 4).

As per claim 17, *Kukol* discloses such a medium (see, for example, the disclosure applied above to claim 5).

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claims 3, 6, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,628,016 to Kukol in view of U.S. Patent No. 6,507,805 to Gordon et al.

As per claims 3, 6, and 15, in addition to the disclosure applied above to claims 2, 4, and 14, *Kukol* fails to expressly disclose representing the stack as a tree of nodes. *Gordon et al.*,

however, teaches a call stack tree (Column 18, lines 25-27), where each path traverses the tree towards the root (Fig 14, item 1358) and each node represents a component of the state (Column 18, lines 25-32). Therefore, it would have been obvious to one of ordinary skill in the computer art at the time the invention was made to modify the method and medium of *Kukol* to include such a tree of nodes representation of the state as per the teachings of *Gordon et al.*, since this would allow for a more organized method of storing states, and a more efficient method for searching states.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric B. Kiss whose telephone number is (571) 272-3699. The Examiner can normally be reached on Tue. - Fri., 7:00 am - 4:30 pm. The Examiner can also be reached on alternate Mondays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Tuan Dam, can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2192

Any inquiry of a general nature should be directed to the TC 2100 Group receptionist:

571-272-2100.

EBK /EBK
May 27, 2005


TUAN DAM
SUPERVISORY PATENT EXAMINER